# *Greater Yellowstone Area Clean Air Partnership Meeting*

**Driggs, Idaho**

**November 15 and 16, 2000**

## Meeting Notes

Attendees

USFS: Ann Acheson, Bob Hammer, Mark Story, Dave Cawrse, John Hamman, Terry Svalberg, Ted Porwell, Megan Bogle, Ronne Sue Helzner
NPS: Mary Hektner, Sean McEldery, Mark Belitz, Karin McCoy
USFWS: Dave Olson
USGS: George Ingersoll
Montana DEQ: John Coefield, Elton Erp, Bob Habeck, Deb Wolfe, Howard Haines
Idaho DEQ: Robert Wilkosz
Wyoming DEQ: Darla Potter
INEEL: Marilynne Manguba, Bob Jones, Betsy Jonker

Summary of GYA-CAP charter and activities to date Mark Story, Gallatin NF, Bozeman

Mark gave an overview of regional air partnerships across the country and presented a list of what agencies are included in the partnership. He also discussed outcomes of past GYACAP meetings, particularly the 11/99 West Yellowstone meeting, reviewed key items in the *Greater Yellowstone Area Air Quality Assessment Document*, reviewed GYCC (USFS and NPS) air quality responsibilities, presented the five (5) current major GYA air quality issues: industrial and oil/gas emissions in SW Wyoming, wildfires and prescribed burning, agricultural burning in the Snake River floodplain in Idaho, residential and business development, and vehicle emissions, especially snow machines. He then showed how he had used the GYA Assessment to develop a similar assessment for the Eastside Forests.

"Hell Life Down Wind of Idaho, One Man's Efforts to Protect Public Health During the Summer 2000 Wildfires" John Coelfield, Montana DEQ, Helena

John talked about the Montana DEQ efforts during the fires of 2000 to warn the public about health effects of forest fire smoke. Because of the size, location, and duration of the western Montana fires in 2000 there was considerable concern about the effects of smoke on public health. Additional particulate monitors were deployed and guidelines were developed for the public to deal with smoke such as when to curtail activities, how to reduce impacts using filters and air conditioning. The smoke/health guidelines were developed in cooperation with EPA and the Forest Service and disseminated through the Montana state government web page, the media, and other methods. This information is available at - http://www.deq.state.mt.us/FireUpdates/Index.htm and http://travel.state.mt.us/fire.htm. A Center for Disease Control study on the health impacts of smoke during the 2000 fires is due for completion in January.

## Montana DEQ/EPA Coordination in Western Montana during the Summer 2000 Wildfires
Ann Acheson, USFS R1, Missoula

Ann continued the discussion of health impacts of the 2000 fires and efforts to forecast smoke levels. The Montana-Idaho Airshed group was set up 20 years ago to deal with smoke from prescribed burning. In April, Meteorologist, Dave Levinson was hired to forecast daily air quality and provide guidance and restrictions on open burning. Dave was also involved in efforts to provide public health information for western Montana in August. Particulate monitors were deployed in Hamilton, 15 miles south at the Valley Complex, fire camp, and at near Wisdom. QA'd data from Montana DEQ will be available this winter. Tips for firefighters on smoke exposure and impacts were also developed in cooperation with Montana DEQ and EPA. Assessment of effects in Montana and Idaho continue through the Forestry Sciences Lab in Missoula as well as work on fire behavior prediction as associated to AQ.

## Idaho 2000 Wildfire Season Robert Wilkosz, Idaho DEQ, Boise

Robert talked about Idaho efforts to inform public on health effects based on information developed by Montana DEQ. Particulate monitoring around Salmon found several days exceeding the $PM_{2.5}$ 24-hour health standard (65 ug/$m^3$), and many 1-hour exceedances. He showed some data on paired TEOM's (one indoor, one outdoor) that indicated air quality indoors (with additional filters and humidifiers installed) was significantly better. As a result of the Save Our Summers agricultural burning suit, which is based on the Americans with Disabilities Act, Idaho DEQ is trying to develop a management strategy using a short-term average rule. A temporary rule is proposed and public comment is being taken on the proposed rule (info at http://www2.state.id.us/deq/news/nov6a_00.htm). Idaho DEQ would appreciate input from GYA-CAP members on the proposed rule.

## USFS R1 Prescribed Burning NEPA Guidelines and USFS R1 Air Quality Website Mark Story

Mark Story showed the USFS Reg. 1 air quality website (http://www.fs.fed.us/r1/gallatin/air/index.html) which includes information on documents, reports, guidelines and meetings, related to the USFS Region 1 air quality program. He then discussed the R1 Prescribed Burning NEPA Guidelines, which was developed to facilitate preparation of NEPA documents related to prescribed burning. The guidance includes specific information that can be used in NEPA documents as well as decision analysis diagrams – how to make decisions, models to be used, decision points, and links to other websites with information on meteorology, climate, and other information that may be useful.

## Montana DEQ Rule Making, Natural Events Action Plan, update on Regional Haze, and WRAP
Deb Wolfe and Bob Habeck, Montana DEQ, Helena

Deb and Bob gave an overview of MT air quality related rulemaking. Most activities in the past year included incorporating federal rules into state rules, changes in permit fees, and developing mapping standards. A SIP call from EPA on the development of a rule on credible evidence was discussed. Montana has developed a credible evidence rule, held hearings, collected public comments and is

nearing g approval. Darla Potter (Wyoming DEQ) indicated that Wyoming is also in the process of developing a credible evidence rule. Montana is also working on a Natural Event Action Plan (NEAP), which is a way to deal with exceedances resulting from natural events. EPA requires a plan to protect public health via a non-regulatory document. Bob talked briefly about the Western Regional Air Partnership (WRAP) (info at http://www.wrapair.org/). Of particular interest is the Fire Emissions Joint Forum (http://www.wrapair.org/CommForum/group13/FIREFOR.HTM) .

SWWTAFF Update and other Oil/Gas Activity in SW Wyoming Darla Potter, Wyoming DEQ, Cheyenne; Terry Svalberg, Bridger Teton NF, Pinedale

Terry gave an update on oil/gas activity in SW Wyoming and handed out a table showing authorized wells, number of existing wells, and new proposed development. Significant additional coalbed methane wells are being proposed between Farson and Pinedale.

Recent NEPA Approved Developments

| Project Name | NEPA Authorized Wells | Current # of Wells | Current # Drill Rigs | |
|---|---|---|---|---|
| Jonah II | 497 | 250 producing | 8 to 9 | Drilling 60 wells/yr Amended to allowed 40 acre spacing |
| Pinedale Anticline | 900 | 25 | 6 to 7 | Drilling 60 to 90 wells/year |
| Continental Divide/ Greater Wamsutter II | 450 RSFO-BLM<br>600 RFO-BLM<br>870 w/RMP Amendment | 300 permitted by 1995 NEPA | Max 15 | 20 year project. Drilling approx. 250-300 wells/year |
| South Baggs | 50 | 43 | 1 | Drilling 5 wells/year |

Proposed Oil and Gas Projects (NEPA Ongoing)

| Project Name | Estimated # of Wells | Project Status |
|---|---|---|
| Desolation Flats | 385 | Currently 68 wells. LOP 30 to 50 years. Analysis beginning 12/00 |
| Bridger-Teton Oil and Gas Leasing | 197 if leasing occurs | EIS draft out to the public for review by the January 2001. |
| Atlantic Rim CBM | 96 | Coalbed methane. NEPA scoping done |
| Seminoe Road Pilot Project | 19 | Coalbed methane. NEPA scoping done |

Other Proposed Developments with Current Leases and NEPA

| Project Name | Estimated # of Wells | Project Status |
|---|---|---|
| Additional development on Forest with leases | 10 requests on Forest | Additional activity on Fontinelle and LaBarge areas |
| Additional development off Forest with leases | 5 near Big Piney<br>5 south of Jonah II | Coalbed methane<br>State lands, coalbed methane |

Darla talked about the status of the SWYYTAF modeling effort, some preliminary results, and how the model may be used (http://deq.state.wy.us/aqd.htm#Visibility).

Snowpack Chemistry Monitoring for 2000. Updated Regional Deposition data (NH4, NO3, SO4) for the GYA George Ingersoll, USGS, Water Resource Division, Denver

George presented a slide show on snowpack chemistry studies in the Rocky Mountain area with particular emphasis on long term trends and background levels. The Colorado USGS WRD has been conducting snow chemistry measurements throughout the Rocky Mountains for the last 8 years. Concentrations NH4, NO3, and SO4 in sampling sites in the GYA are roughly inversely proportional to depth of snowpack with some of the lowest concentrations during the heavy snowpack year of 1997 and some of the highest concentrations in the low snowpack years of 1994 and 2000. Elevated levels of NH4 and SO4 have been documented in and directly adjacent to areas of concentrated snowmobile use in YNP. The Lionshead sampling site (Targhee Pass) has consistently had some of the highest concentrations of NH4, NO3, and SO4 in the GYA. The reason is not known but may be due to dust deposition to the snowpack at the site from agricultural fields in the upper Snake River valley. The snowpack chemistry monitoring work, which is very useful for a variety of purposes, is dependent upon contributed funding and the USGS (Colorado Water Resource Division) needs cooperative funding support to continue the sampling in 2001.

Clean Snowmobile Challenge 2000, and update on YNP Snowmobile Emissions clean Fuels Project Howard Haines, Montana DEQ, Helena

Howard showed a video of the Clean Snowmobile Challenge in which university students built snowmobiles, which are considerably cleaner and quieter than current commercial snowmobiles. Some of the student snowmobiles reduced hydrocarbons by up to 99%, carbon monoxide by 46% & with considerable decibel reduction in engine noise. Current “green” prototype industry snowmobiles use electric or 4 stroke engines with catalytic converters. Howard also explained how some of the snowmobile emissions contain mutagenic substances that can be reduced by biodegradable lubricants.

Howard summarized winter air quality monitoring data for YNP and how NPS personnel and snowmobile users are subjected to relatively high levels of carbon monoxide and noise (93 decibels for patrol rangers and 88 decibels for West Entrance kiosk workers). People who work closely with snowmobiles, such as mechanics, are subjected to elevated levels of benzene, toluene, and fine particulates but generally not in violation of OSHA standards. The use of a combination of oxygenated fuels, biodegradable fuels, direct injection, 4 stroke engines, and even electric engines have potential to reduce snowmobile emissions in the future and reduce engine noise.

Yellowstone National Park Air Quality Update Mary Hektner, YNP, Mammoth

Mary explained that much of the NPS technical expertise is centralized with air resource specialists in Denver so that the YNP role is to maintain air quality monitoring equipment, and collaborate with the Denver NPS staff on air quality issues. The GYA-CAP meetings have been of great benefit to YNP and GTNP staff since air quality information regarding the Parks is more locally available.

Howard Haines and Mary Hektner have been involved with various programs in the GYA focusing on reducing impacts of mobile emissions, including the use of biodiesel, compressed natural gas (CNG), and various ethanol blends (conversion of government fleets to the use of these alternative fuels has the added benefit of making them available for the public), and on other projects related to reducing energy use. These programs include the Green Energy Parks Program and the Yellowstone/Teton Clean Cities Coalition. YNP has been involved in a variety of projects to reduce fuel consumption, reduce emissions, and increase recycling including: using alternate fuels (ethanol) in some YNP vehicles, replacing wood boardwalks with planks manufactured with recycled plastic, using environmentally preferable cleaning products, using recycled glass for road base in parking lots, employee ride sharing, replacing generators with photo voltaic systems, making ethanol available at public gas stations within the Park (2001), extensive trash recycling, and cooperating with the regional composting facility at West Yellowstone. Mary indicated that up the 60% of the trash generated in Yellowstone NP could be composted. The GYA-CAP group felt that YNP should be commended for leadership, innovation, and willingness to implement new techniques with reduce energy and resource consumption and reduce to reduce air and water pollution.

DOE/INEEL Air Quality Monitoring of INEEL Bob Jones and Betsy Jonker, INEEL, Idaho Falls

Bob and Betsy summarized the vast environmental monitoring network that is being conducted at and in the vicinity of the INEEL. During the West Yellowstone 1999 meeting, Kirk Clawson of NOAA explained the meteorological network at the INEEL. Bob and Betsy showed overheads of the air, surface water, and ground water monitoring network at the lab. Much of the historical and current research work at the INEEL has required working with radioactive materials with some radioactive emissions and surface water and soil exposure. The monitoring network is largely focused on radioactive and industrial materials that are largely confined to the lab property. The environmental monitoring and environmental analysis aspects of the INEEL has been a major growth area in recent years and Bob reaffirmed interest in cooperating with the GYA-CAP in partnership activities. Betsy handed out summary documents of the extensive lab monitoring network.

GYA-CAP roundtable

The group discussed potential updates of the GYA-CAP assessment document and how to distribute updates to GYA-CAP members and others. Region 1 USFS has established a website http://www.fs.fed.us/r1/gallatin/air/index.shtml which will also be used to make updated versions of the assessment document available. The current version (May 1999) will be replaced with an updated version and then posted on the website. To accomplish the update Mary Hektner will make some minor edits and bibliography changes, Marylinne Manguba will revise Appendix E (Air Quality Monitoring sites). Mark Story will then replace Appendix C with website addresses for updated emission sources, update Appendix D (Contact Information and Data Sources), and post to the website.

The group reaffirmed the value in the snowpack chemistry monitoring work by George Ingersoll of the USGS to air managers in the GYA. The program is in need of funding augmentation for 2001. George can be contacted at 303-236-4882 or gpoingers@usgs.gov to discuss funding support.

Mark Story will summarize GYA-CAP activity at the GYCC meeting in Jackson on December 7th.

## Summer 2001 field trip

The Bridger Teton NF agreed to host a 3 day field trip on August 14-16, 2001. Tentative plans are to convene in Pinedale at noon on the 14th then review the Jonah gas field wells and production facilities. The 15th and 16th would include a backpack trip into the Big Sandy area of the Bridger Wilderness with participation in the lake chemistry and biotic sampling in Bridger Wilderness lakes. Ted Porwoll and Terry Svalberg from the Pinedale District will be the field trip coordinators.

## October 2001 Meeting in Cody

Dave Cawrse of the Shoshone NF offered to host the fall 2000 meeting in Cody, which will meet, from 1pm on October 17th to noon on October 18th. The meeting is shifted to a month sooner than the 1999 and 2000 meetings in order to allow the Idaho GYA-CAP members to drive through Yellowstone Park and shorten their drive to Cody. Greg Bevenger of the Shoshone NF will arrange meeting facilities and Mark Story will organize the meeting agenda.